

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A hollow fiber membrane module for filtration, diafiltration dialysis methods, comprising:

at least one housing, each said housing including:

an inner generally cylindrical space defined by a first outer dimension radius, and
a surrounding annular packing space extending around said inner space

and defined between a first inner radius equal to said first outer dimension radius and a second outer radius dimension greater than said first outer dimension radius, and

an outer structure surrounding said packing space and having said second outer dimension, said outer structure having at least one open area therein through which liquid can travel into said packing space,

at least two hollow fiber membrane bundles arranged parallel to one another in the packing space, each hollow fiber membrane bundle including a plurality of tubular hollow fiber membranes which are arranged parallel to one another in the packing space only, wherein a volumetric ratio of all the hollow fiber membranes arranged in the packing space to the packing space inside the module is less than 10%, and

at least one segmentation element fitted on a surface of the housing and extending into the packing space in a generally radial direction of the housing for separating at least two said hollow fiber membrane bundles from one another, each segmentation element having at least one opening therein through which liquid can travel.

2. (original) The hollow fiber membrane module as claimed in claim 1, in which the housing has a cylindrical shape.

3. (currently amended) The hollow fiber membrane module as claimed in claim 1, in which the outer structure of the housing includes a lateral surface of the housing is provided with openings defining said at least one open area.

4. (original) The hollow fiber membrane module as claimed in claim 3, in which the openings projected onto a plane are shapes selected from squares, rectangles and circles.

5. (original) The hollow fiber membrane module as claimed in claim 3, in which the openings have dimensions of 3 to 20 mm.

6. (original) The hollow fiber membrane module as claimed in claim 3, in which the ratio of the total surface area of the openings to the total surface area of the housing lateral surface is approximately 0.2 to approximately 0.9.

7. (previously presented) The hollow fiber membrane module as claimed in claim 1, in which the hollow fiber membranes comprise at least one material selected from the group consisting of a ceramic and a polymeric material.

8. (original) The hollow fiber membrane module as claimed in claim 7, in which the hollow fiber membranes including the support structure have a thickness of approximately 5 µm to approximately 300 µm.

9. (original) The hollow fiber membrane module as claimed in claim 7, in which each of the hollow fiber membranes has an inside diameter of up to 2 mm.

10. (original) The hollow fiber membrane module as claimed in claim 1, in which the hollow fiber membranes are arranged in the module in the form of at least one bundle.

11. (previously presented) The hollow fiber membrane module as claimed in claim 10, in which the hollow fibers are rolled up as bundles in the form of mats with a wide fiber spacing, and the fibers being brought to a spacing adapted to the packing density in the region of pottings thereof by the wrapping of conventional spacer materials.

12. (canceled)

13. (currently amended) The hollow fiber membrane module as claimed in claim 1 12, in which the at least one segmentation element comprises a frame part having at least one said opening therein which defines with a free passage surface surrounded by the frame part.

14. (original) The hollow fiber membrane module as claimed in claim 13, in which the free passage surface of the frame part is subdivided by stabilization elements.

15. (currently amended) The hollow fiber membrane module as claimed in claim 14, in which the total surface area of the stabilization elements to the free passage surface surrounded by the frame part is in the range of approximately 2% to approximately 20%.

16. (previously presented) The hollow fiber membrane module as claimed in claim 13, in which the at least one segmentation element is fitted on an inner surface of the housing and an interior of said housing is subdivided into compartments.

17. (currently amended) The hollow fiber membrane module as claimed in claim 1 42, in which the at least one segmentation element is fitted on an outer surface of the housing and subdivides a space located over the outer surface of the lateral surface into compartments.

18. (original) The hollow fiber membrane module as claimed in claim 17, in which the housing with the at least one segmentation element fitted on the outer surface of the lateral surface is accommodated in a second cage-like housing.

19. (currently amended) The hollow fiber membrane module as claimed in claim 1 42, in which the length of at least one segmentation element corresponds to the length of the housing.

20. (currently amended) The hollow fiber membrane module as claimed in claim 1 42, in which the at least one segmentation elements are element is shorter than the housing and are is distributed over the length of the housing with appropriate axial interspaces, no further segmentation element being arranged inside these axial interspaces over the full azimuth angle inside the housing.

21. (currently amended) The hollow fiber membrane module as claimed in claim 1 42, in which the at least one segmentation element is as long as pottings provided at ends thereof and are arranged at an end of the housing such that the pottings are segmented.

22. (original) The hollow fiber membrane module as claimed in claim 16, in which hollow fiber membranes are arranged in at least one compartment produced by at least two segmentation elements.

23. (original) The hollow fiber membrane module as claimed in claim 22, in which the hollow fiber membranes arranged in at least one compartment are fixed on at least one segmentation element.

24. (canceled)

25. (original) The hollow fiber membrane module as claimed in claim 1, which further comprises a housing connection for feeding a liquid into the fiber interior of the hollow fiber membranes and a housing connection for withdrawing a liquid from the fiber interior.

26. (currently amended) The hollow fiber membrane module as claimed in claim 1, in which all constituents are produced from a material capable of being sterilized with water vapor at 121°C.

27-41. (canceled)

42. (original) The hollow fiber membrane module as claimed in claim 9, wherein the hollow fiber membranes have an inside diameter of from about 0.15 mm to about 0.8 mm.

43. (original) The hollow fiber membrane module as claimed in claim 11, wherein the bundles comprise less than 10 fibers per centimeter.

44. (original) The hollow fiber membrane module as claimed in claim 17, in which hollow fiber membranes are arranged in at least one compartment produced by at least two segmentation elements.

45-46. (canceled)

47. (currently amended) The hollow fiber membrane module as claimed in claim 1, wherein the tubular hollow fiber membranes have one of:

- a) the same diameter, and
- b) different diameters.